



$I(J^P) = 0(1^-)$

## OMMITTED FROM SUMMARY TABLE

$I, J, P$  need confirmation. Quantum numbers shown are quark-model predictions.

### $B_s^*$ MASS

From mass difference below and the  $B_s^0$  mass.

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b>5412.0±1.2 OUR FIT</b>			
<b>5411.7±1.6±0.6</b>	<sup>1</sup> AQUINES 06 CLEO $e^+ e^- \rightarrow \gamma(5S)$		
• • • We do not use the following data for averages, fits, limits, etc. • • •			
5414 ±1 ±3	<sup>2</sup> BONVICINI 06 CLEO $e^+ e^- \rightarrow \gamma(5S)$		
<sup>1</sup> Utilized the beam constrained invariant mass peak positions for $B^*$ and $B_s^*$ to extract the measurement.			
<sup>2</sup> Uses 14 candidates consistent with $B_s$ decays into final states with a $J/\psi$ and a $D_s^{(*)-}$ .			

### $m_{B_s^*} - m_{B_s}$

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b>45.9±1.2 OUR FIT</b>			
<b>46.1±1.5 OUR AVERAGE</b>			
45.7±1.7±0.7	<sup>3</sup> AQUINES 06 CLEO $e^+ e^- \rightarrow \gamma(5S)$		
47.0±2.6	<sup>4</sup> LEE-FRANZINI 90 CSB2 $e^+ e^- \rightarrow \gamma(5S)$		
• • • We do not use the following data for averages, fits, limits, etc. • • •			
48 ±1 ±3	<sup>5</sup> BONVICINI 06 CLEO Repl. by AQUINES 06		
<sup>3</sup> Utilized the beam constrained invariant mass peak positions for $B^*$ and $B_s^*$ to extract the measurement.			
<sup>4</sup> LEE-FRANZINI 90 measure $46.7 \pm 0.4 \pm 0.2$ MeV for an admixture of $B^0$ , $B^+$ , and $B_s$ . They use the shape of the photon line to separate the above value for $B_s$ .			
<sup>5</sup> Uses 14 candidates consistent with $B_s$ decays into final states with a $J/\psi$ and a $D_s^{(*)-}$ .			

### $| (m_{B_s^*} - m_{B_s}) - (m_{B^*} - m_B) |$

VALUE (MeV)	CL%	DOCUMENT ID	TECN	COMMENT
<6	95	ABREU 95R	DLPH	$E_{\text{cm}}^{ee} = 88\text{--}94 \text{ GeV}$

### $B_s^*$ DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1 B_s \gamma$	dominant

## **$B_s^*$ REFERENCES**

AQUINES	06	PRL 96 152001	O. Aquines <i>et al.</i>	(CLEO Collab.)
BONVICINI	06	PRL 96 022002	G. Bonvicini <i>et al.</i>	(CLEO Collab.)
ABREU	95R	ZPHY C68 353	P. Abreu <i>et al.</i>	(DELPHI Collab.)
LEE-FRANZINI	90	PRL 65 2947	J. Lee-Franzini <i>et al.</i>	(CUSB II Collab.)